

Role of Information Culture in Workplace Information Literacy: A Literature Review

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Abstract. Information literacy and its related concepts are increasingly important in the digital workplace. How workers use and experience information are dependent on or shaped by the context, such as work tasks, on-the-job experiences, and social aspects. Thus, the role of an organization's information culture would be expected to influence the development of workplace information literacy. This connection however has not been explored previously. The objective of this paper is to focus information literacy on an organizational level. The connection between information culture and information literacy research is explored in an extensive literature review including about 1800 references in these fields of study. The review shows that only few studies address information literacy in connection to information culture ($n = 23$), which indicates there is a research gap. With the insights from this analysis it is addressed that there is an advantage of combining the two perspectives in future research.

Keywords: Information culture · Information literacy · Information use
Information management

1 Introduction

Today's digital workplace is far more information intensive than ever before and the importance of information literacy, what used to be a concept discussed in the context of higher education, has now posed to be relevant and essential in the workplace context. However, despite its increasing importance, the studies conducted on information literacy have predominantly considered it as an individual set of capabilities and often overlooked the contextual influences. There are studies, including Cheuk [1] and Bonner and Lloyd [2] that have examined information literacy in different environments and concluded that how workers use and experience information are dependent on or shaped by the context, such as work tasks, on-the-job experiences, and social aspects. Thus, the role of an organization's information culture influences the development of workplace information literacy. However, previous studies still focus the individual skills in context rather than the other way around, that there are the contextual prerequisites for efficient information use.

The objective of this paper is to focus information literacy on an organizational level, asking how can information literacy be supported by the management? This will be explored from an information culture perspective, which focuses the relationship between individuals and information in their work. There is an understanding that

values accorded to information, and attitudes towards it are indicators of information culture [3]. The information culture literature underlines the interaction with information within organizations [4]. Combining this line of research with information literacy research could improve a holistic understanding of workplace information literacy and how such purposeful literacies can be nurtured within an organization.

2 Information Literacy

Information literacy has been a concept of library and information science for quite long. Initially the notion of information literacy was used to create awareness in the students to assist them writing their assignments correctly. The objective of developing the level of information literacy within the students was to help them understand the need of information during writing assignments, identify reliable information sources, validate the information and use it appropriately by giving adequate credit to the authors through referencing and citations. It is also about analyzing critically, synthesizing, and solving problems [5–8]. The information literacy concept has also gained interest in other contexts because of the increasing amount of information and the challenges to manage the complex information landscape. In workplace context, information is acknowledged as a resource, but there are still less studies connecting information literacy to work or organizational settings [9–11].

3 Information Culture

Information culture can be defined as “the culture in which the transformation of intellectual resources is maintained alongside the transformation of material resources” [12]. This means, bringing information literacy into workplace context demands a shift in the focus from individual to organizational level. In this study this is operationalized by focusing information culture while it is a perspective underlining the role and value of information for efficient work activities and business performance [12–14]. The values embedded to information and the mindset towards it are the key indicators of information culture in organizational settings [15]. These values and attitudes are influenced by the various layers of organizational culture. Thus, information culture is the elements of organizational culture that influence the management of information [16] and in the same manner information culture is embedded in organizational values, norms and practices that shape the importance and attitude towards information creation and use.

4 Methodology

As part of a larger research project on *The Impact of Information Literacy in the Digital Workplace*, a systematic literature review was administered to gain a comprehensive idea about the role of information culture in workplace information literacy. The query run for this literature review was a part of the project. A total of 1804 scientific papers have been

collected focusing on or related to information literacy from major databases such as Science Direct, EBSCO Host, Google Scholar, Library and Information Science and Technology Abstracts (LISTA), Pro-Quest and Web of Science (Table 1). On the second phase of the query, information culture was sought from the pool of these articles.

Table 1. Sources of literature discussing Information Literacy

Databases	Articles extracted
ScienceDirect	1,125
LISTA (EBSCO)	154
Refseek	14
JSTOR	82
Wiley	40
SSRN	31
Google Scholar	13
Emerald Insight	115
ProQuest	70
Sage	160
Total	1,804

The goal of this review process was to focus on literature connecting information literacy with management and organizational information culture. The objective of such analysis was to understand whether adequate importance was given to the contextual, social and cultural aspects of workplace information literacy and their extents. The search for literature was initiated in October 2016 and literature were selected from the publication period within 1970 to 2016.

The literature search was conducted in two phases and started with scanning the sources broadly with keywords connected to information activities in the workplace such as information sharing, knowledge creation, information behavior and information handling. In the second phase the keywords were narrowed down to different literacies (Table 2). This means that the pool of papers (n = 1804) represent papers both specifically focusing information literacy and related terms as well as papers that describe information activities in the workplace more broadly.

The search terms used to identify the articles were: information culture, organization culture and organizational culture, a Boolean search string information literacy and information culture and information literacy and culture. With the help of Adobe Acrobat advanced search option, the search terms were sought in the title, abstract and body of the text. Since the objective of this article is to seek previous studies that acknowledge the importance of information culture in the development of information literacy, all articles that mentioned information culture or the cultural aspects were incorporated. Due to the deficiency of studies in organization information literacy, selection criteria were substantially broad. The time frame was from 1970 to 2016; language was English and paper type ranged from peer-review articles to book reviews. From the total set of retrieved articles on information culture and information literacy

Table 2. Final set of keywords used for the systematic literature review

Keywords/databases
Meta literacy
Information literacy
Media literacy
Library instruction
Cultural literacy
Digital literacy
Visual literacy
News literacy
Network literacy
Computer literacy
ICT literacy
Internet literacy

concepts, there were only 23 articles were found, published in peer reviewed academic journals, with some level of information culture perspective. The selection criteria were articles that mentioned information literacy and information culture, articles that discussed information literacy at organizational level and mentioned information culture or organizational culture and articles that connect and discuss information literacy and information culture in the workplace.

The result clearly indicates a potential research gap and deserves more attention. There is considerable debate and criticism on the fact that information literacy has been often studied as an individual set of competencies while information literacy in workplace context involves a complex system of work organization, social relationships and sociotechnical configurations which is a part of the information culture.

5 Results

For the detailed analysis of the literature a clustering method of the studies was executed. The clusters were determined according to the focal area of the study, impact of information literacy and information culture on different parameters and the role of information literacy and culture in workplaces. All the papers analyzed were based on empirical studies. The objective of this sub-grouping is to have a clear understanding of the trend and common aspects of papers discussing both information literacy and information culture. The discussion of the selected articles mostly circumnavigates five major areas of information literacy and information culture. Information culture contributes in these five concerns of an organization:

1. Organizational information and knowledge management
2. Organizational Effectiveness
3. Workplace information literacy
4. Workplace information use
5. Adoption of IT and ICT process and infrastructure.

5.1 Organizational Information and Knowledge Management

Four articles were found discussing the role of information culture in relation to information and knowledge management. Common objectives of the studies were to identify the information behaviors and values that construct information culture in different contexts such as in project teamwork, municipality and knowledge intensive organizations and the role of information culture in knowledge creation, information management and knowledge management practices. The studies found profound effect of information culture in information management. A balanced information culture that promotes effective creation, use and management of information is necessary for seamless organizational information and knowledge management [17–20].

5.2 Organizational Effectiveness

Four articles were extracted that studied the relationship between information culture and organizational effectiveness. The objectives of the studies were to assess information culture in the workplace either by developing typology or by proposing a conceptual model. However, the studies attempted to execute a systematic examination of information culture and its link to concerns such as organizational effectiveness, innovation and employee satisfaction. It is seen that information culture is influenced by leadership style, institutional regulation and information politics. Information culture explains attitudes and values of information and therefore is related to the effectiveness and performance of the organization. Information culture also explains how information is communicated and used and possible measures to assess information culture and performance are addressed. [13, 21–23].

5.3 Workplace Information Literacy

Only two articles discussed information literacy in workplace context in relation to information culture to some extent. The papers underline that the workplace today is increasingly complex and therefore, the capabilities to effectively collect, analyze, assess and synthesize relevant information is imperative. On the other hand, information usage in the workplace is a form of social interaction with people both inside and outside of the organization who are often the prime source of information. Therefore, the critically important competencies must be studied in relation to organizational and information culture, information infrastructure and information technologies. The studies suggested that information literacy should be determined by multiple factors such as: information infrastructure, information sources, human resources, information technologies, management's attitude, policy and information culture. The encouraging information culture helps employees understand the importance of information literacy and value and utility of information in achieving business goal is recognized [9, 31].

The analyzed papers were based on empirical studies applying different methodological approaches such as interviews, case studies and surveys. However, the dominant approach was qualitative studies and case studies. Different kinds of organizations have been studied such as government agency, multinational organizations and national law firms.

Apart from the above mentioned literature, there were five more articles extracted using the search term “information culture”. However, these articles concentrated on workplace information literacy and concepts related to that but only occasionally mentioned information culture. Sufficient discussion and linking with the concept of information literacy was not found. Therefore, these articles were kept outside the analysis.

5.4 Workplace Information Use

Four papers focused on the role of information culture in connection to the organizational information use outcomes through systematically identifying information behavior and values that determines organizational information culture. The information culture of an organization is determined by a large number of variables such as its mission, history, leadership, employee behavior and values. Organizations seek and use information to understand the environment they are operating in. Enhancing the information use and its outcomes can be exploited by developing an information culture that fosters conversations and exchange of information. Information culture is put forward to have a profound effect on information management and thus information use outcomes [14, 24–26].

5.5 Adoption of IT and ICT Process and Infrastructure

Four articles discussed the importance of information culture in adopting information and communication technologies. An organization can be influenced by diverse types of information culture in its different operations. The studies suggest that number of specific cultural aspects evolve around the information and communication technology infrastructure. While, the diversity and complexity of information culture creates barrier in the synergy between information and communication technologies and the business itself, a mature and enabling information culture contributes in the easy adoption and use of information and communication technologies. ICT investment and implementation has often failed to produce expected outcomes. The studies pointed out that the key issue is not in the technology rather the social factors such as cultures and individual information capabilities [27–30].

6 Information Literacy and Information Culture

This review shows that previous research has focused information literacy and information culture separately although these two lines of research for sure have a lot in common. We know that information literacy in workplace context is a developing area of research [9–11] and that there is a growing consensus that information literacy is beyond a skill-set when studying it in workplace context.

With the insights from this analysis we would like to address the advantage of combining the perspectives in future research. Information culture research has a lot of aspects to add into information literacy in workplace context. The information culture

studies described above highlight the importance of a transparent, open and positive environment towards information and knowledge. Furthermore, information culture affects the information use in organizations, the attitudes towards information, its impact on information infrastructure and how it reduces barriers during implementation of information technologies and systems. The information culture papers also discuss its role in connection to effectiveness, innovation and job satisfaction in organizations. Some papers also focus the perspective of what kinds of skills that are highlighted in connection to efficient information handling as well as the role of information politics in the connection to information culture. Two of the papers have a more specific connection between information culture and information literacy related skills in workplace context highlighting a holistic approach for efficient development of workplace information literacy [9, 31].

The information culture perspective could therefore add to the workplace information literacy discussion on the following insights. Workplace information literacy is not an individual attribute or set of activities, rather a collective attempt in performing the tasks at workplaces. Being a collective approach it includes multiple social and cultural factors that influences the information literacy activities. Apart from the individual skills of information handling, workplace information literacy should be about navigating the organisational level of information awareness. It is important to be able to identify relevant information sources and critically evaluate information needed for problem solving as well as being fluent in navigating the IT landscape of the workplace, but in workplace context the information literacy should also focus aspects like attitudes and values to information, social interaction for knowledge creation, and information use outcomes. From a management point of view this means that individual information handling skills must be supported in interaction with the workplace culture. A successful workplace information literacy programme should take a more holistic approach to information literacy where leadership aspects in connection to information handling is crucial. Acknowledging the cultural aspect in connection to workplace information literacy will also help us design more concrete implementation and assessment frameworks. These should preferably also include quantitative studies considering that most information culture studies so far have used a qualitative approach.

7 Conclusions

The project *Impact of Information Literacy in the Digital Workplace* intends to study information literacy in the workplace and thus addresses the social and contextual influence on workplace information literacy. In order to assess previous studies, the project initiated a literature review on the topic and over 1800 articles were collected. These articles discussed information literacy and concepts relating to and influencing it. From this pool of dataset, papers discussing information culture were separated and later, analyzed. The analysis of these selective papers indicates a substantial research gap in this field. Very few articles were found discussing information culture in direct relation to information literacy. It is therefore suggested that a combination of research on information culture and information literacy would be valuable in the development

of the understanding of workplace information literacy as well as in the development of relevant measures to assess information literacy in the workplace.

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